[4910-13-P]

#### **DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration** 

14 CFR Part 39

[Docket No. FAA-2013-0088; Directorate Identifier 2011-NM-233-AD]

RIN 2120-AA64

**Airworthiness Directives;** Airbus Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede an existing airworthiness directive (AD) that applies to all Airbus Model A318, A319, A320, and A321 series airplanes. The existing AD currently requires repetitive inspections of the upper support of the nose landing gear (NLG), and related investigative and corrective actions if necessary; and also provides an optional terminating action for the repetitive inspections. Since we issued that AD, we have determined that previously allowed terminating actions no longer address the unsafe condition and that a new terminating action is necessary. This proposed AD would require installing a new enhanced manufacturing and maintainability (EMM) braking and steering control unit (BSCU) standard and adds airplanes to the applicability. We are proposing this AD to prevent landings with the NLG turned 90 degrees from centerline, which could result in reduced controllability of the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <a href="http://www.regulations.gov">http://www.regulations.gov</a>. Follow the instructions for submitting comments.
  - Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West
  Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC
  20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30,
  West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE.,
  Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Airbus, Airworthiness Office – EAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airwortheas@airbus.com; Internet <a href="http://www.airbus.com">http://www.airbus.com</a>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <a href="http://www.regulations.gov">http://www.regulations.gov</a>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the

regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1405; fax (425) 227-1149.

#### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2013-0088; Directorate Identifier 2011-NM-233-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <a href="http://www.regulations.gov">http://www.regulations.gov</a>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

#### Discussion

On August 17, 2007, we issued AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007), which superseded AD 2005-24-06, Amendment 39-14386

(70 FR 70715, November 23, 2005). That AD required actions intended to address an unsafe condition on the products listed above.

Since we issued AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007), The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2011-0201, dated October 13, 2011 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

In 2005, an A320 aeroplane experienced a landing with the Nose Landing Gear (NLG) wheels rotated at 90 degrees to the aeroplane centreline.

Investigation showed that the upper support of the NLG shock absorber was damaged and the anti-rotation lugs were ruptured. This caused the nose wheels to lose their centred position reference. The affected Braking and Steering Control Unit (BSCU) had logged a steering system fault because hydraulic power was not available at the time of steering system checks, therefore the BSCU was not able to proceed with the re-centring of the wheels. Failure to centre the NLG wheels correctly may result in a failure of the NLG to retract.

To prevent further landing incidents with NLG wheels rotated at 90 degrees, DGAC France issued AD F-2005-191 [which corresponds to FAA AD 2005-24-06, Amendment 39-14386 (70 FR 70715, November 23, 2005)] to require the implementation of an operational procedure and the accomplishment of certain maintenance actions.

EASA AD 2006-0174, [which corresponds to FAA AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007)] which superseded AD F-2005-191, was issued to extend the applicability and to introduce repetitive boroscope inspections of the NLG upper support lugs and cylinder lugs which have been driven by EMM BSCU L4.1 (Part Number (P/N) E21327001) or L4.5 (P/N E21327003) and, corrective actions, depending on findings.

Since that AD was issued, Airbus has demonstrated the acceptability of installing EMM BSCU L4.9B (P/N E21327006 or P/N E21327106) or conventional BSCU std 10 (P/N C202163392E34) or conventional BSCU std 10.1 (P/N C202163392E35) as terminating action for the actions required by EASA AD 2006-0174, for aeroplanes fitted with twin wheel Main Landing Gear (MLG) units.

For the reasons described above, this AD retains some of the requirements of EASA AD 2006-0174, which is superseded, extends the applicability to all A318, A319, A320 and A321 aeroplanes, requires the installation of BSCU L4.9B, or BSCU std 10, or BSCU std 10.1 for in service aeroplanes fitted with twin wheel MLG, which constitutes terminating action for the repetitive inspections and checks required by this AD.

Installation of a NLG with new upper support anti-rotation lugs and new cylinders lugs, or installation of a NLG for which it can be demonstrated that it was never driven by EMM BSCU L4.1 or L4.5, is no longer considered as terminating action for the requirements of this AD.

The unsafe condition is the NLG turning 90 degrees from centerline, which could result in reduced controllability of the airplane. You may obtain further information by examining the MCAI in the AD docket.

#### **Relevant Service Information**

Airbus has issued the following service bulletins.

- Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated
  June 23, 2011.
- Airbus Mandatory Service Bulletin A320-32-1336, Revision 01, dated
  January 10, 2008.
  - Airbus Service Bulletins A320-32-1350, dated July 31, 2008.
  - Airbus Service Bulletin A320-32-1360, dated March 18, 2009.

- Airbus Service Bulletin A320-32-1369, Revision 01, dated March 31,
  2010.
  - Airbus Service Bulletin A320-32-1387, dated April 7, 2011.

The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

## FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

#### Differences Between This AD and the MCAI or Service Information

Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011, specifies to use Airbus recommendations when restoring the NLG, but this proposed AD would require restoring the NLG in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) (or its delegated agent).

The MCAI permits accomplishment of MCAI paragraph 1.1 by inserting a copy of certain Airbus airplane flight manual (AFM) temporary revisions into the AFM. We have not included that provision in this proposed AD, since the temporary revisions have already been incorporated into the AFM.

#### **Costs of Compliance**

Based on the service information, we estimate that this proposed AD would affect

about 755 products of U.S. registry.

The actions that are required by FAA AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007), and retained in this proposed AD take about 3 work-hours per product, at an average labor rate of \$85 per work hour. Based on these figures, the estimated cost of the currently required actions is \$255 per product.

We estimate that it would take about 35 work-hours per product to comply with the new basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$2,246,125, or \$2,975 per product.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD. We have no way of determining the number of products that may need these actions.

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

# **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- 1. Is not a "significant regulatory action" under Executive Order 12866;
- Is not a "significant rule" under the DOT Regulatory Policies and Procedures
  (44 FR 11034, February 26, 1979);
  - 3. Will not affect intrastate aviation in Alaska; and
- 4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

#### List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

## § 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007), and adding the following new AD:

Airbus: Docket No. FAA-2013-0088; Directorate Identifier 2011-NM-233-AD.

#### (a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### (b) Affected ADs

This AD supersedes AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007).

#### (c) Applicability

This AD applies to the Airbus airplanes listed in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD; certificated in any category; all serial numbers.

- (1) Model A318-111, -112, -121, and -122 airplanes.
- (2) Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

- (3) Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes.
- (4) Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

## (d) Subject

Air Transport Association (ATA) of America Code 32, Landing gear.

#### (e) Reason

This AD was prompted by a report of an airplane landing with the nose landing gear (NLG) turned 90 degrees from centerline, and from additional reports of upper support anti-rotation lugs of the NLG rupturing in service. We are issuing this AD to prevent landings with the NLG turned 90 degrees from centerline, which could result in reduced controllability of the airplane.

## (f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

#### (g) Retained Records Review

This paragraph restates the requirements of paragraph (f) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). Within 5 days after November 30, 2005 (the effective date of AD 2005-24-06, Amendment 39-14386 (70 FR 70715, November 23, 2005)), perform a records review to determine whether the airplane is equipped with or has ever been equipped with an enhanced manufacturing and maintainability (EMM) braking and steering control unit (BSCU) part number (P/N) E21327001 (standard L4.1, installed by Airbus Modification 26965, or Airbus Service Bulletin A320-32-1912) or P/N E21327003 (standard L4.5, installed by Airbus

Modification 33376, or Airbus Service Bulletin A320-32-1261). Airbus Service Bulletin A320-32-1310, dated February 8, 2006, is one approved method for doing the records review.

## (h) Retained Statement of No Further Action Required

This paragraph restates the requirements of paragraph (g) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). For airplanes on which a records review required by paragraph (g) of this AD conclusively determines that the airplane is not and never has been equipped with a BSCU P/N E21327001 or P/N E21327003, no further action is required by paragraphs (i), (j), (k), (l), and (m) of this AD.

#### (i) Retained Airplane Flight Manual (AFM) Revision

This paragraph restates the requirements of paragraph (h) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). For airplanes that are not specified in paragraph (h) of this AD and on which Airbus Modification 31152 has not been incorporated in production (i.e., applicable only to aircraft with steering powered by the green hydraulic system): Within 10 days after November 30, 2005 (the effective date of AD 2005-24-06, Amendment 39-14386 (70 FR 70715, November 23, 2005)), revise the Limitation Section of the Airbus A318/319/320/321 Aircraft Flight Manual (AFM) to include the following information. This may be done by inserting a copy of this AD into the AFM:

The ECAM message, in case of a nose wheel steering failure, will be worded as follows:

- "WHEEL N/W STRG FAULT" for aircraft with the FWC E3 and subsequent standards

- -"WHEEL N.W. STEER FAULT" for aircraft with the FWC E2 Standard.
- If the L/G SHOCK ABSORBER FAULT ECAM caution is triggered at any time in flight, and the WHEEL N/W STRG FAULT ECAM caution is triggered after the landing gear extension:

When all landing gear doors are indicated closed on ECAM WHEEL page, reset the BSCU:

- A/SKID&N/W STRG----- OFF THEN ON

If the WHEEL N/W STRG FAULT ECAM caution is no longer displayed, this indicates a successful nose wheel recentering and steering recovery.

- Rearm the AUTO BRAKE, if necessary.

If the WHEEL N/W STRG FAULT ECAM caution remains displayed, this indicates that the nose wheel steering remains lost, and that the nose wheels are not centered.

- During landing, delay nose wheel touchdown for as long as possible.
- Refer to the ECAM STATUS.
- If the WHEEL N/W STRG FAULT ECAM caution appears, without the L/G SHOCK ABSORBER FAULT ECAM caution:
- No specific crew action is requested by the WHEEL N/W STRG FAULT ECAM caution procedure.
- Refer to the ECAM STATUS.

Accomplishment of the actions required by paragraph (r) of this AD terminates the requirements of this paragraph, and the AFM limitation required by this paragraph must be removed.

Note 1 to paragraph (i) of this AD: When a statement identical to that in paragraph (i) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD or AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007), may be removed from the AFM.

#### (i) Retained Inspection Thresholds

This paragraph restates the requirements of paragraph (i) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). For airplanes that are not specified in paragraph (h) of this AD, at the earlier of the times specified in paragraphs (j)(1) and (j)(2) of this AD: Do a special detailed inspection (boroscopic) for broken or cracked NLG upper support lugs and missing cylinder lugs, and do all applicable related investigative/corrective actions before further flight. Do all actions in accordance with Airbus Technical Note 957.1901/05, dated October 18, 2005; or the Accomplishment Instructions of Airbus Service Bulletin A320-32-1310, dated February 8, 2006. After October 11, 2007 (the effective date of AD 2007-18-09), only Airbus Service Bulletin A320-32-1310, dated February 8, 2006, may be used. Where Airbus Service Bulletin A320-32-1310, dated February 8, 2006, specifies that restoring the NLG is necessary in accordance with Airbus recommendations, this AD requires restoring the NLG in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) (or its delegated agent). Repeat the inspection thereafter at the applicable interval specified in paragraph (k) or (l) of this AD until the inspection required by paragraph (t) of this AD is accomplished.

(1) Within 100 flight cycles following an electronic centralized aircraft monitoring (ECAM) caution "L/G SHOCK ABSORBER FAULT" associated with at

least one of the following centralized fault display system (CFDS) messages specified in paragraph (j)(1)(i), (j)(1)(ii), or (j)(1)(iii) of this AD. As of the effective date of this AD, for the conditions specified in paragraph (j)(1) of this AD, do the actions required by paragraph (r) of this AD.

- (i) "N L/G EXT PROX SNSR 24GA TGT POS."
- (ii) "N L/G EXT PROX SNSR 25GA TGT POS."
- (iii) "N L/G SHOCK ABSORBER FAULT 2526GM."
- (2) At the later of the times specified in paragraphs (j)(2)(i) and (j)(2)(ii) of this AD.
- (i) Within 20 months, 6,000 flight hours, or 4,500 flight cycles since the date of issuance of the original French standard airworthiness certificate, or the original French export certificate of airworthiness, whichever occurs first.
- (ii) Within 6 months, 1,800 flight hours, or 1,350 flight cycles after October 11, 2007 (the effective date of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007)), whichever occurs first.

#### (k) Retained Repetitive Inspection Intervals for BSCU Standard L4.1 or L4.5

This paragraph restates the requirements of paragraph (j) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). For airplanes not specified in paragraph (h) of this AD that are equipped with EMM BSCU standard L4.1 or L4.5: Repeat the inspection specified in paragraph (j) of this AD thereafter at intervals not to exceed the earliest of 6 months; 1,800 flight hours; 1,350 flight cycles; or 100 flight cycles following certain ECAM cautions and CFDS messages, as specified in paragraph (j)(1) of this AD.

# (l) Retained Repetitive Inspection Intervals for BSCU Standard L4.8 or Non-EMM BSCU

This paragraph restates the requirements of paragraph (k) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). For airplanes not specified in paragraph (h) of this AD that are equipped with EMM BSCU standard L4.8 or a non-EMM BSCU: Repeat the inspection specified in paragraph (j) of this AD thereafter at intervals not to exceed the earliest of 20 months; 6,000 flight hours; 4,500 flight cycles; or 100 flight cycles following certain ECAM cautions and CFDS messages, as specified in paragraph (j)(1) of this AD.

# (m) Retained Optional Terminating Action with Limiting Date Restriction

This paragraph restates the requirements of paragraph (I) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007) with a limiting date restriction. For airplanes that are not specified in paragraph (h) of this AD: Installation of an NLG with new upper support anti-rotation lugs and new cylinder lugs, or installation of an NLG that was never driven by EMM BSCU standard L4.1 or L4.5; combined with installation of EMM BSCU standard L4.8 or a non-EMM BSCU; before the effective date of this AD; constitutes terminating action for the requirements of paragraphs (g), (h), (i), (j), (k), and (l) of this AD. Do the installations in accordance with a method approved by either the Manager, International Branch, ANM-116; or the EASA (or its delegated agent). Chapter 32 of the Airbus A318/A319/A320/A321 Aircraft Maintenance Manual (AMM) is one approved method for doing the installations before the effective date of this AD.

## (n) Retained Statement of No Reporting Required

This paragraph restates the requirements of paragraph (m) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). Although Airbus Service Bulletin A320-32-1310, dated February 8, 2006, specifies sending certain inspection results to Airbus, this AD does not include that requirement.

## (o) Part Number Identification

For the purpose of this AD, the following part numbers are identified.

- (1) P/N E21327001: installed by Airbus Modification 26965 or by Airbus Service Bulletin A320-32-1912 in service: EMM BSCU L4.1.
- (2) P/N E21327003: installed by Airbus Modification 33376 or Airbus Service Bulletin A320-32-1261 in service: EMM BSCU L4.5.
- (3) P/N E21327004: installed by Airbus modification 35216 or Airbus Service Bulletin A320-32-1305 or Airbus Service Bulletin A320-32-1343/AOT A320-32A1343 in service: EMM BSCU L4.8.
- (4) P/N E213270B1: installed by Airbus modification 31931 or Airbus Service Bulletin A320-32-1206: EMM BSCU L5-2.
- (5) P/N E21327006: installed by Airbus modification 38973 or Airbus Service Bulletin A320-32-1350 or Airbus Service Bulletin A320-32-1361: EMM BSCU L4.9B.
- (6) P/N E21327106: installed by Airbus modification 151575 or Airbus Service Bulletin A320-32-1387: EMM BSCU L4.9B.
- (7) P/N C202163392E34: installed by Airbus Service Bulletin A320-32-1336 or Airbus Service Bulletin A320-32-1360: conventional BSCU standard (std) 10.

(8) P/N C202163392E35: installed by Airbus Service Bulletin A320-32-1369: conventional BSCU std 10.1.

## (p) Records Review

Within 5 days after the effective date of this AD: Perform a records review to determine whether the airplane is equipped with or has ever been equipped with an EMM BSCU having P/N E21327001 (standard L4.1, installed by Airbus modification 26965, or Airbus Service Bulletin A320-32-1912) or P/N E21327003 (standard L4.5, installed by Airbus modification 33376, or Airbus Service Bulletin A320-32-1261), or P/N E21327004 (standard L4.8, installed by Airbus modification 35216, or Airbus Service Bulletin A320-32-1305, or Airbus Service Bulletin A320-32-1343/AOT A320-32A1343), or P/N E213270B1 (standard L5-2, installed by Airbus modification 31931, or Airbus Service Bulletin A320-32-1206).

Note 2 to paragraph (p) of this AD: Accomplishment of the actions specified in Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011, before the effective date of this AD, provides a method for doing the records review.

# (q) No Further Action Required for Certain Paragraphs

For airplanes on which a records review required by paragraph (p) of this AD conclusively determines that the airplane is not and never has been equipped with an EMM BSCU having P/N E21327001, or P/N E21327003, or P/N E21327004, or P/N E213270B1, no further action is required by paragraphs (r) and (s) of this AD.

## (r) Airplane Flight Manual Revision

For airplanes that are not identified in paragraph (q) of this AD and on which Airbus Modification 31152 has not been incorporated in production (i.e., applicable only to aircraft with steering powered by the green hydraulic system): Within 10 days after the

effective date of this AD, revise the Limitation Section of the Airbus A318/319/320/321 AFM to include the following information. This revision may be done by inserting a copy of this AD into the AFM.

The ECAM message, in case of a nose wheel steering failure, will be worded as follows:

- "WHEEL N/W STRG FAULT" for airplanes with Flight Warning Computer (FWC) software post E3P.
- "WHEEL N.W. STEER FAULT" for airplanes with FWC software pre E3P.
- If the L/G SHOCK ABSORBER FAULT ECAM caution is triggered at any time in flight, and the WHEEL N/W STRG FAULT ECAM caution is triggered after the landing gear extension:
- When all landing gear doors are indicated closed on ECAM WHEEL page, reset the BSCU:
- A/SKID&N/W STRG------ OFF THEN ON
- If the WHEEL N/W STRG FAULT ECAM caution is no longer displayed, this indicates a successful nose wheel recentering and steering recovery.
- Rearm the AUTO BRAKE, if necessary.
- If the WHEEL N/W STRG FAULT ECAM caution remains displayed, this indicates that the nose wheel steering remains lost, and that the nose wheels are not centered
- During landing, delay nose wheel touchdown for as long as possible.
- Refer to the ECAM STATUS.

- If the WHEEL N/W STRG FAULT ECAM caution appears, without the L/G SHOCK ABSORBER FAULT ECAM caution:
- No specific crew action is requested by the WHEEL N/W STRG FAULT ECAM caution procedure.
- Refer to the ECAM STATUS.

Note: For airplanes fitted with pre FWC E3P standard, read N.W STEER instead of N/W STRG.

Accomplishment of the actions required by this paragraph terminates the requirements of paragraph (i) of this AD and the AFM revision required by paragraph (i) of this AD must be removed.

Note 3 to paragraph (r) of this AD: When a statement identical to that in paragraph (r) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

#### (s) Inspection Following Certain Centralized Fault Display System Messages

- (1) For airplanes other than those identified in paragraph (q) of this AD: Within 100 flight cycles following an ECAM caution "L/G SHOCK ABSORBER FAULT" associated with at least one of the following CFDS messages specified in paragraph (s)(1)(i), (s)(1)(ii), or (s)(1)(iii) of this AD, do the actions in paragraph (s)(2) of this AD.
  - (i) "N L/G EXT PROX SNSR 24GA TGT POS."
  - (ii) "N L/G EXT PROX SNSR 25GA TGT POS."
  - (iii) "N L/G SHOCK ABSORBER FAULT 2526GM."
- (2) For airplanes identified in paragraph (s)(1) of this AD: Do the actions specified in paragraphs (s)(2)(i) and (s)(2)(ii) of this AD.

- (i) Check the NLG strut inflation pressure, weight-off- and weight-on-wheels, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011, and before further flight, do all applicable corrective actions and adjustments, in accordance with Airbus A318/A319/A320/A321, Task 12-12-32-610-001-A Check NLG Shock Absorber Fluid Level and Charge Pressure ("Two-Point Check" Aircraft on Jacks to start), Revision August 1, 2012.
- (ii) Do a boroscopic inspection for broken or cracked NLG upper support lugs and missing or cracked cylinder lugs, and do all applicable related investigative and corrective actions before further flight. Do all actions in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011. Where Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011, specifies restoring the NLG in accordance with Airbus recommendations, this AD requires restoring the NLG before further flight, in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the EASA (or its delegated agent).

#### (t) Initial Boroscopic Inspection

At the applicable times specified in paragraphs (t)(1) and (t)(2) of this AD: Do a boroscopic inspection for broken or cracked NLG upper support lugs and missing or cracked cylinder lugs, and do all applicable related investigative and corrective actions before further flight. Do all actions in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011. Where Airbus Mandatory Service Bulletins A320-32-1310, Revision 01, dated

June 23, 2011, specifies restoring the NLG in accordance with Airbus recommendations, this AD requires restoring the NLG before further flight, in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the EASA (or its delegated agent). Accomplishment of the actions required by this paragraph terminate the requirements of paragraphs (j), (k), and (l) of this AD.

- (1) For airplanes fitted with twin wheel main landing gear (MLG) that have been equipped with EMM BSCU standard L4.1, L4.5, or L4.8: At the later of the times specified in paragraphs (t)(1)(i) and (t)(1)(ii) of this AD.
- (i) Within 20 months, 6,000 flight hours, or 4,500 flight cycles since first flight of the airplane, whichever occurs first.
- (ii) Within 6 months, or 1,800 flight hours, or 1,350 flight cycles after the effective date of this AD, whichever occurs first.
- (2) For airplanes fitted with bogie MLG: At the later of the times specified in paragraphs (t)(2)(i) and (t)(2)(ii) of this AD.
- (i) Within 20 months, or 6,000 flight hours, or 4,500 flight cycles after the installation of EMM BSCU standard L5-2, whichever occurs first.
- (ii) Within 6 months, or 1,800 flight hours, or 1,350 flight cycles after the effective date of this AD, whichever occurs first.

## (u) Repetitive Boroscopic Inspections

After accomplishing the inspection specified in paragraph (t) of this AD: Repeat the inspection required by paragraph (t) of this AD thereafter at the applicable interval specified in paragraphs (u)(1), (u)(2), and (u)(3) of this AD.

- (1) For airplanes fitted with twin wheel MLG that have been equipped with EMM BSCU standard L4.8: At intervals not to exceed 20 months, or 6,000 flight hours, or 4,500 flight cycles, whichever occurs first.
- (2) For airplanes fitted with twin wheel MLG that have been equipped with EMM BSCU standard L4.1 or L4.5: At intervals not to exceed 6 months, or 1,800 flight hours, or 1,350 flight cycles, whichever occurs first.
- (3) For airplanes fitted with bogie MLG: At intervals not to exceed 20 months, or 6,000 flight hours, or 4,500 flight cycles, whichever occurs first.

## (v) Modification

For airplanes fitted with twin wheel MLG: Within 6 months after the effective date of this AD, modify the airplane by installing EMM BSCU standard L4.9B, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1350, dated July 3, 2008.

# (w) Optional Method of Modification

Doing a modification specified in paragraph (w)(1), (w)(2), or (w)(3) of this AD, is acceptable for compliance with the requirements of paragraph (v) of this AD.

- (1) Modification of the airplane by installing EMM BSCU standard L4.9B, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1387, dated April 7, 2011.
- (2) Modification of the airplane by installing conventional EMM BSCU standard 10, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1360, dated March 18, 2009; or Airbus Mandatory Service Bulletin A320-32-1336, Revision 01, dated January 10, 2008.

(3) Modification of the airplane by installing conventional EMM BSCU standard 10.1 in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1369, Revision 01, dated March 31, 2010.

## (x) Terminating Action

In-service modification of an airplane fitted with twin wheel MLG as required by paragraph (v) of this AD constitutes terminating action for the initial and repetitive inspections required by paragraph (t) of this AD. In addition, the AFM changes required by paragraph (r) of this AD may be removed from the AFM; and the requirements of paragraph (s) of this AD are no longer required.

## (y) Exemption From Certain Actions

Except for paragraph (y) of this AD, airplanes that have been delivered with Airbus modification 38973 and/or Airbus modification 151575 that install EMM BSCU standard L4.9B are not affected by the requirements of this AD, provided that no installation of previous EMM BSCU standards L4.1, L4.5, or L4.8 has been performed since the airplane first flight.

#### (z) Parts Installation

For airplanes that do not have EMM BSCU L4.1, or EMM BSCU L4.5, or EMM BSCU L4.8 installed: As of the effective date of this AD, no person may modify an airplane by installing EMM BSCU standards L4.1, L4.5, or L4.8 on any airplane.

#### (aa) Credit for Previous Actions

(1) This paragraph restates the requirements of paragraph (n) of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007). This paragraph provides credit for the inspections required by paragraph (j) of this AD, if those inspections were

performed before October 11, 2007 (the effective date of AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007)) using Chapter 12, Subject 12-14-32 of the Airbus A318/A319/A320/A321 AMM, as revised by Airbus A318/A319/A320/A321 AMM Temporary Revision 12-001, dated November 13, 2005.

- (2) This paragraph provides credit for the inspections and related investigative/corrective actions required by paragraphs (j), (k), and (l) of this AD, if those inspections were performed before the effective date of this AD using Airbus Service Bulletin A320-32-1310, dated February 8, 2006.
- (3) This paragraph provides credit for the modifications specified in paragraph (w)(2) of this AD, if those modifications were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A320-32-1336, dated September 19, 2007.
- (4) This paragraph provides credit for the modifications required by paragraph (w)(3) of this AD, if those modifications were performed before the effective date of this AD using Airbus Service Bulletin A320-32-1369, dated March 22, 2009.

#### (bb) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International

Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1405; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD. AMOCs approved previously in accordance with AD 2007-18-09, Amendment 39-15189 (72 FR 51164, September 6, 2007), are not approved as AMOCs with this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

#### (cc) Related Information

- (1) Refer to MCAI EASA Airworthiness Directive 2011-0201, dated October 13, 2011, and the service information service information identified in paragraphs (cc)(1)(i) through (cc)(1)(viii) for related information.
- (i) Airbus A318/A319/A320/A321, Task 12-12-32-610-001-A Check NLG Shock Absorber Fluid Level and Charge Pressure ("Two-Point Check" Aircraft on Jacks to start), Revision August 1, 2012.
- (ii) Airbus Mandatory Service Bulletin A320-32-1310, Revision 01, dated June 23, 2011.

(iii) Airbus Mandatory Service Bulletin A320-32-1336, Revision 01, dated January 10, 2008.

(iv) Airbus Service Bulletin A320-32-1350, dated July 31, 2008.

(v) Airbus Service Bulletin A320-32-1360, dated March 18, 2009,

(vi) Airbus Service Bulletin A320-32-1369, Revision 01, dated March 31, 2010.

(vii) Airbus Service Bulletin A320-32-1387, dated April 7, 2011.

(viii) Airbus Technical Note 957.1901/05, dated October 18, 2005.

(2) For service information identified in this AD, contact Airbus, Airworthiness Office – EAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airwortheas@airbus.com; Internet <a href="http://www.airbus.com">http://www.airbus.com</a>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on January 31, 2013.

Ali Bahrami, Manager, Transport Airplane Directorate, Aircraft Certification Service.

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